

ABSTRACT OF THE DISCLOSURE

An optical transmission module has a laser diode, a photodiode, a binary-type DOE lens for $1.3\mu\text{m}$ and a DOE lens for $1.55\mu\text{m}$ in a package. An optical fiber is arranged so that its end surface faces the optical transmission module. The laser diode radiates light of wavelength $1.3\mu\text{m}$. The photodiode receives light of wavelength $1.55\mu\text{m}$. Both DOE lenses have diffraction action of mutually different diffraction orders for light of the two wavelengths. The optical axis passing from the laser diode to the optical fiber and the optical axis passing from the photodiode to the optical fiber are separated. The optical transmission module is compact and has a small number of components.